

[Name of Document] Abstract

[Summary]

[Purpose] To realize a semiconductor device having good TFT characteristics.

[Means to Solve the Problem]

5 By using a high purity target as a target, using a single gas, argon (Ar), as a sputtering gas, setting the substrate temperature at 300°C or less, setting the sputtering power from 1 kW to 9 kW, and setting the sputtering gas pressure from 1.0 Pa to 3.0 Pa, the film stress of a film is made from -1×10^{10} dyn/cm² to 1×10^{10} dyn/cm². By thus using a conducting film in which the amount of sodium contained within the film
10 is equal to or less than 0.03 ppm, preferably equal to or less than 0.01 ppm, and having a low electrical resistivity (equal to or less than $40 \mu\Omega \cdot \text{cm}$), as a gate wiring material and a material for other wirings of a TFT, the operating performance and the reliability of a semiconductor device provided with the TFT can be increased.